Understanding the Water Cycle

Grades 3 – 5

H_2O ACTIVITY

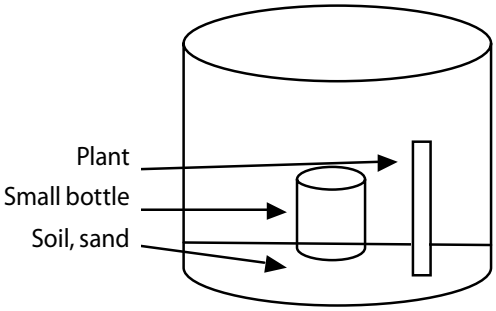
BACKGROUND:
To understand the way that pollutants move through the ecosystem, one must understand the hydrologic cycle.

VOCABULARY:
Condensation
Precipitation
Evaporation
Water vapor
Water cycle
Infiltration

OBJECTIVE:
Students will observe and demonstrate the different parts of the water cycle.

MATERIALS:
- 2 large bottles, or other plastic containers
- 2 small recycled containers/cups
- Soil
- Sand
- Water
- Small houseplant(s) or moss
- Markers: red, blue, green, yellow
- Tape
- Paper (1 sheet per person)

TIME:
1 class period, then follow-up for 2 weeks



PROCEDURE:

1) Prepare the large bottles by cutting around the shoulders of the bottles, forming "lids." This will be taped back on once the bottle is filled with terrarium items.

2) Have students review the water cycle and focus on the words evaporation, transpiration, precipitation and runoff.

3) Ask students to show the movement of water using a sheet of paper and colored arrows. Use red for precipitation, blue for surface water, green for groundwater, and yellow for water that is evaporating or transpiring back into the atmosphere.

4) Ask: How do plants affect the water cycle? How do animals? Where does water pick up impurities? How? What human activities affect the water cycle?

5) Perform a demonstration using the large bottles. Label one "transpiration," the other "evaporation." Put sand and soil in each, and a plant in the "transpiration" bottle. Fill the little bottles half full with water. Place one in each large bottle (touching the side of the bottle).

6) Mark the water levels of each little bottle each day. Have the students record their observations.

Adapted from *TVA: A World of Resources*, 1989

SONOMA COUNTY WATER AGENCY